

WHAT IS CLAIMED IS:

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1. An imaging apparatus forming an image by performing scanning by deflecting a light beam, the imaging apparatus comprising:

10 a data conversion part that converts multi-bit input image data into data specifying a pulse width or intensity of the light beam,

wherein the image data is input to said data conversion part a given number of times in succession; and

15 said data conversion part performs a different data conversion for each of scanning lines of the given number based on the input image data.

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2. The imaging apparatus as claimed in claim 1, wherein said data conversion part comprises a conversion table using a storage part.

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3. The imaging apparatus as claimed in claim 2, further comprising a control part that sets any value for each of the scanning lines in said conversion table.

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10 4. A multi-beam imaging apparatus forming an image by performing scanning by simultaneously deflecting a plurality of light beams, the multi-beam imaging apparatus comprising:

15 a plurality of data conversion parts provided individually for the corresponding light beams, the data conversion parts determining pulse widths or intensities of the corresponding light beams based on input multi-bit image data and performing different data conversions from each other.

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5. The multi-beam imaging apparatus as claimed in claim 4, wherein each of the data
25 conversion parts includes a data conversion table

*using a storage part.

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6. The multi-beam imaging apparatus as claimed in claim 5, further comprising a control part that sets any independent value in each of said conversion tables for the corresponding light beam.

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7. The multi-beam imaging apparatus as claimed in claim 4, wherein said data conversion parts comprise a part that converts the input multi-level image data into modulation code data so that the light beams are output differently from each other based on the modulation code data.

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8. The multi-beam imaging apparatus as claimed in claim 4, wherein each of said data

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conversion parts includes a register to which
rewritable pulse-width data and a rewritable phase
code are input and a selector that selects a given
one of written contents of the register based on the
5 input multi-level image data.

10 9. The multi-beam imaging apparatus as
claimed in claim 8, wherein the rewritable pulse-
width data and phase code are matched in advance with
a characteristic of the multi-beam imaging apparatus.

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10. An imaging apparatus outputting print
image data in accordance with input image data,

20 wherein:

gradation representation is performed by
inputting image data of a resolution lower than that
of the imaging apparatus and outputting different
data for each of a given number of pixels in a
25 secondary scanning direction, the image data having

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equal values for the pixels.

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11. The imaging apparatus as claimed in claim 10, further comprising an optical writing unit writing the pixels simultaneously by corresponding light beams.

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12. An imaging method outputting print image data in accordance with input image data, wherein:

gradation representation is performed by inputting image data of a resolution lower than that of an imaging apparatus and outputting different data for each of a given number of pixels in a secondary scanning direction, the image data having equal values for the pixels.

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13. The imaging method as claimed in claim 12, wherein the pixels are written simultaneously by corresponding light beams by an optical writing unit.

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14. An imaging apparatus forming an image by performing scanning by deflecting a light beam, the imaging apparatus comprising:

data conversion means for converting multi-bit input image data into data specifying a pulse width or intensity of the light beam,

wherein the image data is input to said data conversion means a given number of times in succession; and

said data conversion means performs a different data conversion for each of scanning lines of the given number based on the input image data.

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15. The imaging apparatus as claimed in claim 14, wherein said data conversion means

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*comprises a conversion table using storage means.

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16. The imaging apparatus as claimed in claim 15, further comprising control means for setting any value for each of the scanning lines in said conversion table.

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17. A multi-beam imaging apparatus forming an image by performing scanning by simultaneously deflecting a plurality of light beams, the multi-beam imaging apparatus comprising:

a plurality of data conversion means provided individually for the corresponding light beams, the data conversion means determining pulse widths or intensities of the corresponding light beams based on input multi-bit image data and performing different data conversions from each other.

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18. The multi-beam imaging apparatus as claimed in claim 17, wherein each of the data conversion means includes a data conversion table using storage means.

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19. The multi-beam imaging apparatus as claimed in claim 18, further comprising control means that sets any independent value in each of said conversion tables for the corresponding light beam.

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20. The multi-beam imaging apparatus as claimed in claim 17, wherein said data conversion means comprise means for converting the input multi-level image data into modulation code data so that the light beams are output differently from each other based on the modulation code data.

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21. The multi-beam imaging apparatus as
claimed in claim 17, wherein each of said data
conversion means includes a register to which
rewritable pulse-width data and a rewritable phase
5 code are input and a selector that selects a given
one of written contents of the register based on the
input multi-level image data.

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22. The multi-beam imaging apparatus as
claimed in claim 21, wherein the rewritable pulse-
width data and phase code are matched in advance with
15 a characteristic of the multi-beam imaging apparatus.

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